

Application No. 09/945,483

Attorney Docket No. 66251

REMARKS

This is in response to the presently pending Office Action that was mailed on August 1, 2006. Claims 1-10 are pending and stand rejected and/or are objected to by the Office Action. Specifically, the Office Action rejected claims 1, 3, 9, and 10 under 35 U.S.C. §102(e) as being anticipated by US Pub. 2002/0172181 to Sayeed ("the Sayeed '181 reference"). Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Sayeed '181 in view of US Pub.2005/0013240 to Gerakoulis. Claims 5 and 7 were rejected under 35 U.S.C. §103 over Sayeed '181 in view of U.S. Patent No. 6,728,202 to Sayeed ("the Sayeed '202 reference"). Claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over Sayeed '181 and Sayeed '202 and further in view of Gerakoulis. The Office Action indicated that claims 2 and 6 would be allowable to include all the limitations of the base claim and any intervening claims. The rejections as they may apply to the claims presented herein are respectfully traversed.

At the outset, Applicants acknowledge with appreciation the Examiner's indication that claims 2 and 6 would be allowable if rewritten as indicated above.

Turning now to the specific rejections, the Office Action rejected claim 1 based upon the Sayeed '181 reference. Amended claim 1 recites selecting a set of orthogonal complex codes, an optimum real code, and a spreading code. Each of these codes is associated with each of the other codes and the codes are related to each other by a value n . For a particular selection, the value n is the same for all the codes.

A code length for the set of orthogonal complex codes is selected and this length is greater than a code length of the associated optimum real code and less than or equal to a code length of the associated spreading code. The length of the set of orthogonal complex codes is chosen so that utilization of a bandwidth of at least one of a plurality of user links is optimized. Symbols are transferred across the at least one of a plurality of user links to or from at least one of a corresponding plurality of user terminals. The symbols are represented by a corresponding one of the set of orthogonal complex codes.

In contrast, Sayeed '181 teaches the random selection of *unrelated* codes. In the example given in Sayeed, a Walsh code has length 64 ($n=6$), a Hadamard code has length 96 ($n=4$), and a PN sequence has length $2^{15}-1$ ($n=15$). Sayeed '181, paragraphs 25-27. These codes are not related since the value n is not the same for each

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code and, in fact, varies between 4 and 15. In other words, Sayeed '181 does not teach the codes are associated with each other and that each of the codes is "related to a value n, the value n being the same for each of the codes" as recited in claim 1.

Sayeed '181 teaches the random choice of codes that is unrelated to any performance consideration. In fact, no optimization of any of code length relative to any other code length in order to achieve a particular result is mentioned in Sayeed '181. In other words, Sayeed '181 is silent as to choosing "the length of the set of orthogonal complex codes...so that utilization of a bandwidth of at least one of a plurality of user links is optimized" as recited in claim 1.

Since the above-mentioned elements of claim 1 are not taught or suggested by the Sayeed '181 reference, it is believed claim 1 is allowable. Claim 5 has recitations similar to claim 1 and it is believed that claim 5 is allowable for the same reasons as described above with respect to claim 1. The remaining claims depend directly or indirectly upon claims 1 and 5. Since claims 1 and 5 are allowable, it is believed the remaining dependent claims are also allowable.

In view of the foregoing, it is submitted that the application is in condition for allowance which is respectfully requested. The Commissioner is hereby authorized to charge any additional fees which may be required in this application under 37 C.F.R. §§1.16-1.17 during its entire pendency, or credit any overpayment, to Deposit Account No. 50-0383. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0383.

Respectfully submitted,

By: 

Georgann S. Grunebach
Attorney for Applicants
Registration No. 33,179

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The DIRECTV Group, Inc.
CA/LA1/A109
P.O. Box 956
2250 E. Imperial Highway
El Segundo, CA 90245-0956
Phone: (310) 964-4615